

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination (RCE) under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 22, 2008, has been entered.

### ***Response to Amendment***

2. Applicant's amendment filed with the RCE has been entered. Claims 1 and 2 have been amended as requested. Claims 6 and 15-33 have been cancelled, while new claims 34 and 35 have been added. Thus, the pending claims are 1-5, 7-14, 34, and 35.

3. Said amendment is sufficient to overcome the 102/103 rejection of claims 1-14 over the Cadenhead reference (US 4,617,208) as set forth in section 5 of the last Office Action (Final Rejection mailed 10/15/07). Specifically, applicant has amended claim 1 to limit the fabric to a knit fabric. Since Cadenhead is drawn to a tufted fabric, the anticipation rejection is no longer valid. Despite this advance, the application is not in condition for allowance due to the following new rejections.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-5, 7-14, 34, and 35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Claim 1 is indefinite for the use of the phrase “non-tufted knitted fabric” in the preamble and step (f), while the body of the claim recites pile “tufts” on five occurrences. Thus, it is unclear how a fabric can be “non-tufted” while comprising a plurality of “tufts.” Claims 2-5, 7-14, 34, and 35 are rejected for their dependency upon claim 1. For the purpose of examination, the claims are interpreted as being drawn to a knitted pile fabric.
7. Claim 1 is indefinite for the use of the phrase “thereby forming...a...fabric with improved surface pile.” It is unclear what aspect of the surface pile shows an improvement. Additionally, it is unclear what said improvement is in comparison to.
8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
9. Claims 1-5, 7-14, 34, and 35 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification as originally filed does not provide support for a “non-tufted” fabric comprising a plurality of tufts.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-5, 7-14, 34, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,617,208 issued to Cadenhead, Sr. in view of US 3,940,522 issued to Wessells.

Applicant's independent claim is a product-by-process claim. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or an obvious variant from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964.

For examination purposes, the final product produced from applicant's product-by-process of claim 1 is a knitted pile fabric comprising a plurality of pile tufts projecting from a base portion in rows, wherein said pile tufts consists of groups of continuous filament fibers of partially oriented polyester fibers that are "laterally bloomed" or bulked.

Cadenhead teaches a process for making a cut pile, tufted carpet having non-directional pile (abstract). The process comprises the steps of:

- (a) knitting a thermoplastic yarn into a deknittable fabric,
- (b) heating the fabric to a temperature so that the bends and curves of the yarn generated by its knitted configuration is established in the yarn's memory,
- (c) cooling the fabric,

- (d) deknitting the cooled fabric and rewinding the yarn under enough tension to restraighten it,
- (e) tufting the yarn into a primary backing,
- (f) backcoating the tufted primary backing with an adhesive backcoat, and
- (g) heating the backcoated and tufted carpet to a temperature at which the pile yarn reconforms to the bends and twists of the knitted configuration in its memory.

The pile yarns may be of any cross-sectional shape, but are preferably ribbon shaped (i.e., aspect ratio greater than 1), and are preferably made of polypropylene, nylon, or polyester (abstract, col. 1, lines 40-59, and col. 2, lines 21-32).

Since the deknitted yarn is “restraightened” prior to tufting, applicant’s recitation to a fabric “made by employing continuous filament non-textured” yarn or fibers is met by Cadenhead’s disclosure. Additionally, applicant’s recitation of “lateral blooming” is met by Cadenhead’s teaching that the yarn is latently bulked (i.e., the yarn reconforms to its knitted configuration stored in its memory upon heating to appropriate temperature). Furthermore, note Figure 3 of Cadenhead which shows said bulking or blooming occurs in a lateral fashion, thereby providing coverage between rows of tufts.

Hence, Cadenhead teaches the limitations of claims 1-4 and 13 with the exception that the fabric is a knitted pile fabric rather than tufted pile fabric. However, it would have been obvious to one of ordinary skill in the art to substitute the tufted pile construction of Cadenhead with a knitted pile structure, which is well known in the art as an alternate pile fabric construction. For example, Wessells teaches a cut pile fabric comprised of crimped and non-crimped pile fibers, wherein said pile fabric is constructed by weaving, tufting, or knitting (col. 7, lines 14-16 and 32-34 and col. 13, line 35-col. 14, line 7). Therefore, it would have been obvious to one skilled in the art to substitute one known pile fabric construction for another

known pile fabric construction since said substitution would have yielded predictable results to one skilled in the art at the time of the invention. Claims 1-4 and 13 are rejected as being obvious over the cited prior art.

Regarding claims 5, 11, and 12, Cadenhead and Wessells fail to explicitly teach the recited “average void area” property. However, it is reasonable to presume that said property is met by the invention of the prior art combination. Support for said presumption is found in the use of similar materials (i.e., self-bulking yarns capable of bulking upon heat treatment) and in the similar production steps (i.e., forming a knit pile fabric of latently bulkable yarns and exposing to heat to bulk said yarns) used to produce the carpet. Like materials cannot have mutually exclusive properties. Therefore, claims 5, 11, and 12 are rejected as being obvious over the Cadenhead and Wessells references.

Claims 7-10 and 14 are also rejected under 103 since said claims are drawn to process limitations which are not given patentable weight at this time. Said process limitations do not appear to produce a structurally different product from the prior art product. The presence of process limitations on product claims in which the product does not otherwise patentably distinguish over the prior art, cannot impart patentability to the product. *In re Stephens*, 145 USPQ 656. Without a showing that said process limitations produce a materially different product from the prior art product, claims 7-10 and 14 are also rejected.

New claims 34 and 35 are also rejected. In particular, it is asserted that the limitations thereof are drawn to the process of making the knit pile fabric. As such, said limitations are only given patentable weight to the extent they materially effect the final product (i.e., knit pile fabric). hence, the claims are rejected since the cited prior art teaches knit pile fabrics.

In the event said limitations are given patentable weight, it is well known in the art that knit pile fabrics can be made on double needle bar warp knitting machines. Applicant is hereby given Official Notice of this fact. [The examiner notes that the facts asserted to be common and well-known are capable of instant and unquestionable demonstration as being well-known. To adequately traverse such a finding, applicant must specifically point out the supposed errors in the examiner's action, which would include stating why the noticed fact is not considered to be common knowledge or well-known in the art.] all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions and the combination would have yielded predictable results to one skilled in the art at the time of the invention. Additionally, it would have been readily obvious to select a six bar construction with ground yarns carried in bars 1, 2, 5, and 6. Note where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Therefore, claims 34 and 35 are also rejected over the cited prior art.

#### ***Response to Arguments***

12. While applicant's arguments are drawn to a rejection that has been withdrawn, the following comments are made with respect to arguments that are still relevant to the new rejection.

13. Applicant traverses the Cadenhead reference by asserting it is drawn to polypropylene pile tufts, rather than the presently claimed polyester (Amendment, paragraph spanning pages 7-8). Applicant states, "Cadenhead has no enabling disclosures showing the use of non-textured

polyester yarn. The fact that Cadenhead may contain “global” language of other types of materials is not relevant.” (Amendment, page 8, 1<sup>st</sup> paragraph.) The examiner respectfully disagrees. While Cadenhead exemplifies polypropylene pile yarns, the reference clearly teaches polyester yarns are also suitable for the invention (col. 2, lines 21-32):

The present invention is primarily useful with polyolefin, polyester, or polyamide (nylon) fibers. Thermoplastic carpet fibers made out of such synthetic resins are, of course, well known. Suitable resins include, for example, polypropylene, polyethylene terephthalate, nylon 6, nylon 11, nylon 66, nylon 610, and nylon 611. Spun yarns (made of staple fibers) as well as yarns made of one or more plies of a continuous filament fiber can be used. Blends of thermoplastic fibers, such as nylon with polyester, can be used as well. When spun yarns are used they will preferably be made of nylon or polyester fibers.

Hence, the Cadenhead teaching is indeed a sufficient and enabling disclosure for polyester yarns. Disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments. *In re Susi*, 440 F.2d 442, 169 USPQ 423 (CCPA 1971). Additionally, the Cadenhead disclosure is presumed enabled for polyester yarns absent a showing to the contrary. Thus, applicant’s statement that “there is good reason to doubt that one can simply switch the material (without any apparent motivation stated in the art to do so) and then obtain identical results” is unfounded since the Cadenhead art clearly provides motivation to “switch” the polypropylene to polyester.

14. Regarding applicant’s contention that the present claim 1 is not a product-by-process claim, but rather a hybrid claim (Amendment, page 9, 2<sup>nd</sup> paragraph – 2<sup>nd</sup> paragraph, page 11), the examiner respectfully disagrees. Yes, the product-by-process claim of issue in *In re Thorpe* recites “The product of the process of claim 1.” However, product-by-process claims are also defined as claims reciting “A product made by the process [steps or method] of...” (i.e., product described by only method limitations). On the other hand, hybrid claims include product claims

that positively recite both product limitations and method limitations of how said product is made. For example, *In re Johnson*, 157 USPQ 523, discusses a hybrid claim:

1. A fired ceramic structural article having a high surface area in relation to its size, and comprising at least one ceramic sheet member and at least one thin corrugated web of ceramic having an amplitude of corrugations at least as great as the thickness of said web, said corrugated web being no greater than 50 mils thick and being permanently ceramically bonded to said sheet member in a non-separable manner along at least a portion of some of the ridges on one side of said corrugated web so as to provide at least one set of aligned passages defined by grooves of said corrugated web between adjacent ridges permanently bonded to said sheet member,

said article being formed by a process involving ceramically firing to rigidity a self-supporting green ceramic structure of like configuration having firm temporary bonds of green ceramic corresponding in location to said permanent ceramic bonds in said structural article, said green ceramic structure comprising materials convertible into said fired ceramic structural article by said ceramic firing, and said firm temporary bonds of said green ceramic structure being unified continuous material paths of green ceramic material between parts of said green structure so temporarily bonded.

The hybrid claim of Johnson has a simplified format of “A product having **A** and comprising **B** and **C**, wherein **C** is bonded to **B** in a described manner, wherein said product is formed by the process involving **x**, **y**, and **z**.” In other words, the product is first limited by positively recited structural and chemical elements and then limited by process of making limitations. Similarly, the hybrid claim at issue in *In re Luck*, 177 USPQ 523 states:

1. A hollow light-transmitting lamp-bulb-shaped glass member adapted to surround a source of radiations, a coating carried on the external surface of said glass member, said coating comprising a mixture of:  
(a) a polymer consisting essentially of polymethylmethacrylate having a tack point temperature of at least 170°C. and an inherent viscosity of at least 0.44;  
(b) from 0.1% to 10% by weight of said polymethylmethacrylate of an organofunctional silane having organic functional groups and silicon functional groups, organic functional groups of said silane reacted with said polymethylmethacrylate and silicon functional groups of said silane reacted with the surface of said glass member to couple said polymethylmethacrylate to said glass member;  
(c) from 2% to 20% by weight of said polymethylmethacrylate of an additive organic substance which is at least substantially transparent, has a boiling temperature at atmospheric pressure of at least 250°C., and is completely soluble in said polymethylmethacrylate polymer within the temperature range of from -40°C to 170°C.;  
and



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(d) said coating having been affixed to said glass member by applying thereon a liquid organic solvent having dissolved therein said polymer, said organofunctional silane and said additive organic substance, and said coated glass member thereafter being baked.

A simplified version of the claim can be outlined as “A product and a coating thereon, said coating comprising a mixture of A, B, and C, wherein said coating is applied by x and y.” Once again, the hybrid claim first limits the coating product and then describes the method of forming the coating. So one can clearly see the difference between a hybrid claim and a product-by-process claim in that product-by-process claims define the product solely in terms of the method of making said product rather than by a combination of product limitations and method of making limitations.

Looking now to applicant's claim:

1. (Currently Amended) A non-tufted knitted fabric made by employing continuous filament non-textured polyester yarn or fibers, said fabric being made by the process of:

- (a) providing a continuous filament non-textured polyester yarn, and
- (b) heating and drawing simultaneously the non-textured polyester yarn to pre-stress the yarn,
- (c) knitting the pre-stressed polyester yarn together in a single fabric forming operation, thereby forming a pile portion extending a base portion,
- (d) wherein the pile portion projects from the base portion, the pile portion comprising a plurality of tufts, at least some of the tufts consisting of groups of continuous filament non-textured fibers, the fibers comprising a partially oriented thermoplastic polymer, the tufts being arranged upon the base portion in rows,
- (e) heating the tufts with the non-textured polyester yarn to a temperature above the glass transition temperature of the polyester yarn fibers, thereby laterally blooming the tufts, and
- (f) thereby forming in a single fabric forming operation a non-tufted knitted fabric with improved surface pile.

Simplifying the format, applicant's claim is drawn to “A product made by employing A, said product made by the process of (a), (b), (c), (d), and (e), thereby forming said product. Since the phrase “a product made by employing A” does not positively limit the final product to comprise A, said phrase amounts to a process limitation. Therefore,

applicant's claim is not a hybrid claim, but rather a product-by-process claim. Therefore, applicant's arguments traversing the product-by-process interpretation of the claim is unfounded.

***Conclusion***

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl Juska whose telephone number is 571-272-1477. The examiner can normally be reached on Monday-Friday 10am-6pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached at 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

16. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*/Cheryl Juska/*  
Primary Examiner  
Art Unit 1794